

Division of Environmental Health and Communicable	Disease Prevention
Section: 4.0 Diseases and Conditions	Updated 7/03
Subsection: Tularemia	Page 1 of 16

Tularemia Table of Contents

Tularemia
Fact Sheet
Suspect Tularemia Case Investigation Form (For use only if bioterrorism is suspect)
Investigation of Tularemia (VPH-5)

Depth in Theating	Division of Environmental Health and Communicable	Disease Prevention
	Section: 4.0 Diseases and Conditions	Updated 7/03
NA PULL	Subsection: Tularemia	Page 2 of 16

Tularemia

Overview (1,2)

For a complete description of tularemia, refer to the following texts:

- Control of Communicable Diseases Manual (CCDM).
- Red Book, Report of the Committee on Infectious Diseases.

NOTE: Tularemia is a potential bioterrorism weapon. **If the case has no remarkable history of natural exposure (e.g., tick bite), a bioterrorism event should be considered.** If you suspect that you are dealing with a bioterrorism situation, contact your Regional Communicable Disease Coordinator immediately.

Case Definition (3)

Clinical description

An illness characterized by several distinct forms, including the following:

- Ulceroglandular (cutaneous ulcer with regional lymphadenopathy)
- Glandular (regional lymphadenopathy with no ulcer)
- Oculoglandular (conjunctivitis with preauricular lymphadenopathy)
- Oropharyngeal (stomatitis or pharyngitis or tonsillitis and cervical lymphadenopathy)
- Intestinal (intestinal pain, vomiting, and diarrhea)
- Pneumonic (primary pleuropulmonary disease)
- Typhoidal (febrile illness without early localizing signs and symptoms)

Clinical diagnosis is supported by evidence or history of a tick or deerfly bite, exposure to tissues of a mammalian host of *Francisella tularensis*, or exposure to potentially contaminated water.

Laboratory criteria for diagnosis

Presumptive:

- Elevated serum antibody titer(s) to *F. tularensis* antigen (without documented fourfold or greater change) in a patient with no history of tularemia vaccination or
- Detection of *F. tularensis* in a clinical specimen by fluorescent assay

Confirmatory:

- Isolation of *F. tularensis* in a clinical specimen or
- Fourfold or greater change in serum antibody titer to *F. tularensis* antigen

Case classification

Confirmed: a clinically compatible case with confirmatory laboratory results

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	Section: 4.0 Diseases and Conditions	Updated 7/03							
A Pulling	Subsection: Tularemia	Page 3 of 16							

Probable: a clinically compatible case with laboratory results indicative of presumptive infection

Information Needed for Investigation

- Verify the diagnosis. Determine what laboratory tests were conducted and the results.
- **Establish the extent of illness.** Determine if household or other close contacts are, or have been, ill by contacting the health care provider, patient or family member.
- **Maintain a high index of suspicion** regarding any cluster of cases of pneumonia diagnosed as being due to *F. tularensis*. This should be reported promptly to the Regional Communicable Disease Coordinator because of the potential use of this organism as a biowarfare agent.

Case/Contact Follow Up And Control Measures

If terrorist activity is suspected:

- Contact appropriate law enforcement authorities.
- Contact the Regional Communicable Disease Coordinator.
- Complete the "Missouri Department of Health and Senior Services, Suspect Tularemia Case Investigation Form." This form is included in this Section.

General follow-up:

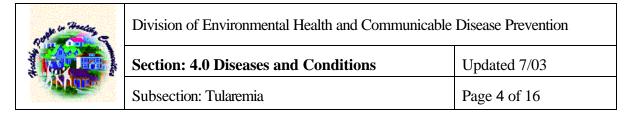
Determine the source of infection. Tularemia is not transmitted person-to-person. However, shared activities or exposures should be investigated for cases among families and friends.

Control Measures

See the Control of Communicable Diseases Manual, Tularemia, "Methods of control."

See the Red Book, Tularemia, "Control Methods."

- Avoid bites of deerflies, mosquitoes, and ticks.
- Use insect repellents.
- Wear light-colored clothing so ticks can be easily observed and removed.
- Wear shirts with long sleeves and pants to reduce exposure to ticks, mosquitoes, and deerflies; tuck pants into socks or tall boots.
- Conduct body checks for ticks frequently and remove ticks promptly.
- Avoid drinking, bathing, swimming, or working in untreated water, particularly in areas where tularemia is known to be endemic.



Laboratory Procedures

The State Public Health Laboratory (SPHL) conducts testing for *F. tularensis*.

These specimens may be highly infective. Extreme caution should be taken in collecting, preparing for shipment, and transporting any material suspected of being contaminated with a biological agent.

• Specimen Collection and Transport

- Clinical: Tissue samples from humans (or animals) must be submitted frozen (-30 to -70 degrees C). Best samples for testing include liver, spleen, lungs or lymph node. If pneumonic tularemia is suspected, collect a sputum or bronchial/tracheal wash. Specimens can be placed in any sterile container that seals well. Blood can also be cultured, but is seldom positive.
- ➤ Reference cultures: The SPHL can also confirm or identify any organism isolated from another laboratory that is suspected of being *F. tularensis*. Reference cultures should be submitted on an enriched chocolate slant.
- Environmental samples: At this time, environmental sampling, if performed, would be situation-specific. No standardized testing procedures are available. Consult the SPHL.
- **Testing available:** Culture, isolate identification, DFA and rapid antigen detection by TRF.
- **Reporting:** All reporting times are the minimum time. Any individual specimen could take longer. *F. tularensis* is a very slow-growing organism. Primary isolation from a clinical specimen may take three to five days. The SPHL can perform an FA and TRF directly on tissue specimens. This could be completed within two to three hours after receipt of the specimen at the laboratory. Confirmation of a suspect organism isolated at another laboratory by direct FA and TRF can be completed within one to two hours of receipt at the SPHL.

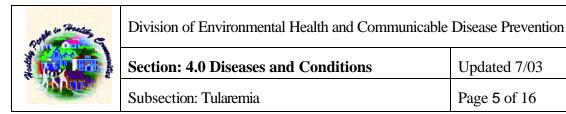
Additional information on laboratory procedures can be obtained from the Regional Communicable Disease Coordinator or from staff at the SPHL. The SPHL telephone number is 573-751-0633 and the web site is: http://www.dhss.state.mo.us/Lab/index.htm. (3 June 2003)

Reporting Requirements

Tularemia is a Category I(B) disease and shall be reported to the local health authority or to the Missouri Department of Health and Senior Services (DHSS) within 24 hours of first knowledge or suspicion by telephone, facsimile or other rapid communication.

- 1. For all cases, complete a "Disease Case Report" (CD-1).
- 2. For non-bioterrorism cases, complete an "Investigation of Tularemia" (VPH-5).

Missouri Department of Health and Senior Services Communicable Disease Investigation Reference Manual



caoic	Discase i revention
	Updated 7/03
	Page 5 of 16

- 3. Entry of the completed CD-1 into MOHSIS negates the need for the paper CD-1 to be forwarded to the Regional Health Office.
- 4. Send the completed secondary investigation form to the Regional Health Office.
- 5. For cases suspected of being part of a bioterrorist event, complete a "Suspect Tularemia Case" Investigation Form"
- 6. All outbreaks or "suspected" outbreaks must be reported as soon as possible (by phone, fax or e-mail) to the Regional Communicable Disease Coordinator. This can be accomplished by completing the Missouri Outbreak Surveillance Report (CD-51).
- 7. Within 90 days from the conclusion of an outbreak, submit the final outbreak report to the Regional Communicable Disease Coordinator.

References

- 1. Chin, James, ed. "Tularemia (Rabbit fever, Deer-fly fever, Ohara disease, Francis disease)." Control of Communicable Diseases Manual. 17th ed. Washington, DC: American Public Health Association, 2000:532-535.
- 2. American Academy of Pediatrics. "Tularemia." In: Pickering LK, ed. 2000 Red Book: Report of the Committee on Infectious Diseases. 25th ed. Elk Grove Village, IL. 2000: 618-620.
- 3. Centers for Disease Control and Prevention. Case Definitions for Infectious Conditions Under Public Health Surveillance. MMWR 1997: 46 (No. RR-10). "Tularemia," 1999, http://www.cdc.gov/epo/dphsi/casedef/tularemia current.htm (3 June 2003)

Other Sources of Information

- 1. Hornick, Richard B. "Tularemia." Bacterial Infections of Humans Epidemiology and Control. 3rd ed. Eds. Alfred S. Evans and Philip S. Brachman. New York: Plenum, 1998: 823-837.
- 2. Cross, J. Thomas Jr. and Robert L. Penn. "Francisella tularensis (Tularemia)." Principles and Practice of Infectious Diseases. 5th ed. Eds. Gerald L. Mandell, John E. Bennett, and Raphael Dolin. New York: Churchill Livingstone, 2000: 2393-2401.
- 3. The Merck Veterinary Manual. 8th Ed. Ed. Susan E. Aiello. Whitehouse Station, NJ: Merck & Co., Inc., 1998: 494, 2166, 1394. http://www.merckvetmanual.com/mvm/index.jsp (search "tularemia"). (3 June 2003)

Web Sources of Information

U.S. Army Institute of Infectious Diseases, "Biological Agent Information Papers-Tularemia." http://www.nbc-med.org/SiteContent/MedRef/OnlineRef/GovDocs/BioAgents.html#TULAREMIA (3 June 2003).

Tularemia

FACT SHEET

What is tularemia?

Tularemia is a bacterial disease (*Francisella tularensis*) that infects both humans and animals. Although many wild and domestic animals have been infected, the rabbit is most often involved in disease outbreaks.

Who gets tularemia?

People who spend a great deal of time outdoors are at greater risk of exposure to tularemia than people with other occupational or recreational interests. People at risk also include those who come in contact with flesh or blood of infected animals, such as: laboratory workers, farmers, veterinarians, hunters, trappers, those who cook/handle wild game, and spouses of hunters or other household members.

How is tularemia spread?

Many routes of human exposure are known to exist, including:

- The bite of an infected tick or biting fly.
- Contact of the skin or mucous membranes with contaminated water or blood/tissue while handling, dressing, or skinning infected animals.
- Handling or eating insufficiently cooked meat of infected animal hosts (e.g., rabbits).
- Drinking contaminated water.
- Inhalation of dust from contaminated soil, grain, or hay.
- Handling contaminated paws or pelts of animals.
- Rarely, from bites of coyotes, squirrels, skunks, hogs, cats, and dogs whose mouths
 presumably were contaminated from eating an infected animal.

Tularemia is not spread from person-to-person.

What are the symptoms of tularemia?

The symptoms of tularemia depend on whether the bacteria enter through the skin, gastrointestinal tract, or lungs. When these bacteria are introduced into the skin (e.g., tick bite), symptoms usually consist of an ulcerative skin lesion and swollen glands. Ingestion of the organism in food or water may produce a throat infection, abdominal pain, diarrhea, and vomiting. Inhalation of the organism in dust may produce a fever alone or combined with a pneumonia-like illness.

How soon do symptoms appear?

Symptoms generally appear within 1 to 14 days, but usually within 3 to 5 days.

What is the treatment for tularemia?

Certain antibiotics are effective in treating tularemia, such as streptomycin and gentamicin.

Does past infection make a person immune?

Long-term immunity will follow recovery from tularemia. However, reinfection has been reported, particularly in laboratory workers.

How can tularemia be prevented?

- 1. Rubber gloves should be worn when skinning or handling animals, especially rabbits.
- 2. Wild game, especially rabbit, muskrat, and squirrel, should be cooked thoroughly before eating.
- 3. Avoid drinking, swimming, or working in untreated water where infection may prevail among wild animals.
- 4. Avoid bites of flies and ticks.
- 5. Avoid tick-infested areas, especially during the warmer months.
- 6. Wear light colored clothing so ticks can be easily seen and removed. Wear a long sleeved shirt, hat, long pants, and tuck your pant legs into your socks.
- 7. Walk in the center of trails to avoid overhanging grass and brush.
- 8. Check your body every few hours for ticks when you spend a lot of time outdoors in tick-infested areas. Ticks are most often found on the thigh, arms, underarms, and legs or where tight fitting clothing has been.
- 9. Use insect repellents containing DEET on your skin and permethrin on your clothing. Be sure to follow the directions on the container and wash off repellents when going indoors. Carefully read the manufacturer's label on repellents before using on children.
- 10. Ticks should be removed promptly and carefully by using tweezers and applying gentle, steady traction. Do not crush the tick's body when removing it. Apply the tweezers as close to the skin as possible to avoid leaving tick mouthparts in the skin. Do not remove ticks with your bare hands. Protect your hands with gloves, cloth, or tissue and be sure to wash your hands after removing a tick.
- 11. After removing the tick, disinfect the skin with soap and water or other available disinfectants.
- 12. Universal precautions pertaining to protection from drainage/secretions from infected individuals should be followed.

Missouri Department of Health and Senior Services Section for Communicable Disease Prevention Phone: (866) 628-9891 or (573) 751-6136

Today's date:	<i>!!</i>		ID:	
Patient name	First	Last	t	
Sex: Male Fen	nale	Date of birth://_		Age:
Home address:		Zip:		Phone 1:
City/Borough:		County::		Phone 2:
Employer:		Occupation:		Work location:
Work address:		Zip:		Phone:
City/Borough		County:		
Any recent travel outsi	de of MO? Y	N Unknown If yes,	, where and when:	
MEDICAL HISTORY	:	Di	r.'s name and conta	act info:
(Circle one answer for e	each symptom)	symptoms for the first time		?
New onset skin lesions	(i.e., rash, papule, ucler Y N Unknown	, vesicle, pustule, purpuri	e lesions)?	Onset date:/
Location of lesion(s)):	Initial description:		Progression:
		Date Notes		Date Notes
Itchy	Y N Unk			
Swollen	Y N Unk			
Tender	Y N Unk			
Oozing	Y N Unk			
Satellite blisters	Y N Unk			
Eschar	Y N Unk			
Surrounding Edema	Y N Unk			
Fever	Y N Unknown	If yes, max temp:	F	Onset date:/
Chills	Y N Unknown	J , I .		Onset date:/
Malaise	Y N Unknown			Onset date:/
Muscle aches	Y N Unknown			Onset date:/
Headache	Y N Unknown			Onset date:/
Pharyngitis/Tonsillitis	Y N Unknown			Onset date:/
Diaphoresis	Y N Unknown			Onset date:/
Weight loss	Y N Unknown			Onset date:/

Pulse-temperature		
dissociation	Y N Unknown	Onset date://
Cough	Y N Unknown	0 (1)
Cough	☐ Productive ☐ Bloody ☐ Purulent	Onset date:/
Chest pain/discomfort	Y N Unknown	Onset date://
Shortness of breath	Y N Unknown	Onset date://
Pneumonia	Y N Unknown	Onset date:/
Respiratory distress	Y N Unknown	Onset date://
Abdominal pain	Y N Unknown	Onset date://
Nausea/vomiting	Y N Unknown	Onset date://
Diarrhea	Y N Unknown	
Diarrilea	Bloody	Onset date:/
Lymphadenopathy	Y N Unknown If yes, where?	
	☐ Painful	Onset date:/
Conjunctivitis	Y N Unknown If yes, where?	Onset date:/
Sepsis	Y N Unknown	Onset date://
Meningitis	Y N Unknown	Onset date://
☐ Hemorrhagic		
Other signs/symptoms:		
Care:	Name and Location Date of visit/consult:	Comments
Admitted to hospital	:	
☐ Seen by PMD:		
☐Seen by ID:		
Other		
Antibiotics given?	Y N Unknown Other Treatment given?	Y N Unknown
_	If yes, describe:	
Dose:		
Start date:	Stop date:	

Current clinical status	☐ Impro	ved	☐ No change	Worsened	☐ Back to baseline
Describe progression:					
Disposition	Discharge	ed A	dmitted to ward	☐ Admitted to ICU	☐ Outpatient ☐ Died
				If died, date of death	//
Current diagnosis	Tularemi	a			
	Pne	ımonic [] Typhoidal	Ulceroglandular	
	☐ Glaı	ndular [Oculoglandular	Oropharyngeal	
	☐ Non-Spec	ific Febrile I	llness		
	☐ Pneumon	ia of Unknov	vn Etiology		
	_		vii Etiology		
	Other (sp	ecify)			
LABORATORY SPEC	IMENS OBTA	INED:			
Blood/serum	Y N	Unknown	Status: at ho	ospital sent to SPHL [sent to CDC
Tracheal/lung aspirate	Y N	Unknown	Status: at ho	ospital sent to SPHL [sent to CDC
Sputum	Y N	Unknown	Status: at ho	ospital sent to SPHL [sent to CDC
Skin biopsy or skin lesio					
material	Y N	Unknown	_	ospital sent to SPHL [_
Conjunctival exudate	Y N	Unknown		ospital sent to SPHL [sent to CDC
Pharyngeal exudate	Y N	Unknown	_	ospital sent to SPHL [sent to CDC
CSF	Y N	Unknown	Status: at ho	ospital sent to SPHL [sent to CDC
Other	Describe	:			
Specimens available nov	v?	Y	N Unknown		
		If ye	es, what is available	e and where?	

LAB RESULTS:							
Specimen	Date Obtained	Te	st Ordered	L	aboratory	Result	Current Location of Specimen
Blood/serum					v		•
Tracheal/lung aspirate							
Sputum							
Skin biopsy or skin lesion material							
Conjunctival exudate							
Pharyngeal exudate							
CSF							
Other, specify							
Other, specify							
Other, specify							
OTHER DIAGNOSTIC	TESTS.			I.			
Chest x-ray		Jnknown					
	If yes, des						
Other	Describe:						
Other	Describe.						
ENVIRONMENTAL SA	MPLING/TES	ΓING					
Location of Specimen			Reside	nce	☐ Work Pl	ace	Other, specify
Type of Specimen(s)							
Where was specimen(s) of	collected						
Date(s) collected							
Type of test(s) performed	d						
Result(s) of test(s)							
Date(s) of test result(s)							
Name of laboratory perfe	orming test(s)						
Address of Laboratory p	erforming test(s)					
Telephone number of lab	oratory perfor	ming					

ACTIVITIES DURING THE THREE WEEKS PRIOR TO ONSET OF SIGNS/SYMPTOMS

This section of the questionnaire should be completed for activities that took place at a second residence, at work, during recent travel outside home town or city, at sporting events, at religious meetings, at recreational events, at volunteer activities, at other meetings/events, at other outdoor activities and while doing hobby activities.

Month												
Wonth				 								
Date for past three weeks ${\mathbb R}$												l
Day of the week* ®												
Residence 2 (e.g., vacation home) Location (address):												
Work 1: Location: Shift: % time outdoors:												
Work 2: Location: Shift: % time outdoors:												
Recent travel 1 outside home town or city describe:	Location:											
Recent travel 2 outside home town or city describe:	Location:											
Sporting Event 1 describe:	Location:											
Sporting Event 2, describe:	Location:											
Religious Meeting 1, describe:	Location:											

^{*}Use following acronyms: S=Sunday, M=Monday, T=Tuesday, W=Wednesday, Th=Thursday, F=Friday and Sa=Saturday.

Date for past three weeks ®												
Day of the week* ®												
Religious Meeting 2, describe:	Location:											
Recreational Event 1, describe:	Location:											
Recreational Event 2, describe:	Location:											
Volunteer Activity 1, describe:	Location:											
Volunteer Activity 2, describe:	Location:											
Other Meetings/Events 1, describe:	Location:											
Other Meetings/Events 2, describe:	Location:											
Other Outdoor Activity 1, describe:	Location:											
Other Outdoor Activity 2, describe:	Location:											
Hobby Activity 1, describe:	Location:											
Hobby Activity 2, describe:	Location:											

^{*}Use following acronyms: S=Sunday, M=Monday, T=Tuesday, W=Wednesday, Th=Thursday, F=Friday and Sa=Saturday.

POTENTIAL RISK EXPOSURES

YES	NO	UNK	Contact With Animals
		П	If yes, describeOccupational Associated With Animals
			If yes, describeOwn Pets
	Ш	Ш	If yes, describe
			Contact With Rats, Mice, Ground Squirrels, Rabbits, Prairie Dogs, Chipmunks or Other Small Mammals
			If yes, describe Presence of Rats, Mice, or Other Small Mammals in Home or Place of Work If yes, describe
			If yes, describe Hobbies If yes, describe
OTHER SIGNS/S YES	SYMI		AL RISK EXPOSURES IN THE 3 WEEKS PRIOR TO ONSET OF
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies If yes, describe Hunting Trips
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies If yes, describe Hunting Trips If yes, describe Trap Animals
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies If yes, describe Hunting Trips If yes, describe Trap Animals If yes, describe Butcher Animals
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies If yes, describe Hunting Trips If yes, describe Trap Animals If yes, describe Butcher Animals If yes, describe Hiking Trips Hiking Trips
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies If yes, describe Hunting Trips If yes, describe Trap Animals If yes, describe Butcher Animals If yes, describe Hiking Trips If yes, describe Camping Trips
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies If yes, describe Hunting Trips If yes, describe Trap Animals If yes, describe Butcher Animals If yes, describe Hiking Trips If yes, describe Camping Trips If yes, describe Contact With Hay or Straw
SIGNS/S	SYMI	PTOM	Presence of Rats. Mice, or Other Small Mammals in Any Locations Visited in the 3 Weeks Prior to Onset of Signs/Symptoms If yes, describe Contact With Ticks, Mosquitoes, or Biting Flies If yes, describe Hunting Trips If yes, describe Trap Animals If yes, describe Butcher Animals If yes, describe Hiking Trips If yes, describe Camping Trips If yes, describe

ASSOCIATED CASES

YES NO UNK	Contact (within 3 weeks of onset of illness) With Persons With a Febrile, Flu-Like,
	and/or Respiratory Illness, or an Ulcerated Skin Lesion
	Name(s) Address(es) or Other Locating Information
	Description of Illness(es)
	Date(s) of Onset (if known)
	Patient/Family Aware of Other Persons With a Febrile, Flu-Like, and/or Respiratory Illness
	or an Ulcerated Skin Lesion
	Name(s)
	Address(es) or Other Locating Information
	Description of Illness(es)
	Date(s) of Onset (if known)
	Other Associated Cases
	Number
	Describe Association With Patient
ame of person com	pleting form: Phone:

- 1. Phone and Fax numbers at Missouri Department of Health and Senior Services (MDHSS): Ph: 1-800-392-0272, FAX: 573-751-6041
- 2. If further information becomes available on this patient, ask them to call the Division of Environmental Health and Communicable Disease Prevention (573-751-6000) during business hours, or after hours, call Department Emergency Response Management Center (1-800-392-0272) and ask for the on call officer
- 3. If there are any questions by the provider re: prophylaxis or specimen preparation, refer them to or fax them the appropriate MDHSS Alert

MISSOURI DEPARTMENT OF HEALTH

INVESTIGATION OF TULAREMIA

Patient's Name							Age	Sex	Race	
Street Address or RFD					City or Town	City or Town County				
Place Employed or School Attended					Occupation					
			How did you	did you first learn of this case?			Date			
			Lab. Rpt.	PH		Physician Interview				
Patient Hospitalized	j?	Date	At	ttending Phy	ysician		<u>-</u>)		
	Yes				Hospital Physicia		<u></u>			
Name of Hospital					HOSPITAL FILYSICIA					
Site of Initial Lesion	n:									
Source of Infection	:	Tick Bite _	Infec	ted Animal	Species	Unknow	า	_		
Date of Exposure _			Loca	tion and Cir	cumstances of Exposu	sre:				
OP-11 Comments					<u></u>					
Clinical Symptoms:						Dante 0: -	verson in	naia		
•										
							ing			
•								<u> </u>		
Conjunctivitis Prostration										
Medication:										
			DIAGNOS	TIC LABOR	RATORY TESTS ON F	PATIENT				
Date Collected			Type of Specimen Acute Blood		Resul	ts	Name o		f Laboratory	
			Convalescent	Blood						
			Lesion Cultur							
			Other (Specify)			<u>-</u>				
Final Diagnosis:	Tulare	emia	Not Tulare	mia	Other Diagnosis _					
Type of Tularemia:	:									
• •		Oculogi	andular	Glandu	lar Typhoid	al Ot	her			
_										
Comments:										
			 						<u> </u>	
Source of Informat	ion					-,				
Name of Investigate	or:						Date	ρ·		
manne or mivestigati	J						Date	·		